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10/608,206	06/30/2003	Keith Istvan Farkas	200208214-1	7647

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EXAMINER	
TRAN, VINCENT HUY	
ART UNIT	**PAPER NUMBER**
2115	

DATE MAILED: 11/21/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/608,206	FARKAS ET AL.	
	Examiner	Art Unit	
	Vincent T. Tran	2115	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *30 June 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-46* is/are pending in the application.

4a) Of the above claim(s) *43-46* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-42* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *6/30/03* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1-46 are pending for examination.

Election/Restrictions

2. Restriction to one of the following inventions is required under 35 U.S.C. 121:

I. Claims 1-42, drawn to the details of steps or means for modifying an amount of power used by a digital data processing system or a system response to available power, classified in class 713, subclass 30.

II. Claims 43-46, drawn to means or steps for utilizing a hardware structure for providing to a processor arrangement of the digital data processing system including a characteristic of the digital data processing system's component configuration, classified class 710, subclass 104.

3. The invention of group I and group II are related as subcombinations disclosed as usable together in a single combination. The subcombinations are distinct from each other if they are shown to be separately usable. In the instant case invention [I] has separate utility such as watchdog timer which monitor input and compare with abnormality determining times or preventing clock drifting in a system by periodically checking for the last update time. In the instant case invention [II] has separate utility such as electronic communication includes digital signature, or encryption, encoding etc.. to insure that the messages are authentic. See MPEP § 806.05(d).

Because these inventions are distinct for the reasons given above and the search required for Group I is not required for Group II, restriction for examination purposes as indicated is proper.

4. During a telephone conversation with Mr. Ashok K. Kang on 11/2/2005 a provisional election was made to prosecute the invention of Group I, claim 1-42. Affirmation of this election must be made by applicant in replying to this Office action. Claim 43-46 withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

6. Claims 1, 6, 8, 10, 15 are rejected under 35 U.S.C. 102(e) as being anticipated by Kling et al. US 20010003207.

7. As per claim 1, Kling et al. disclose a method for controlling power consumption for at least one computer system, wherein a power supply for the at least one computer system has a maximum power output based on a nominal power consumption of the at least one computer system, the method comprising:

detecting an amount of power consumed by the at least one computer system [paragraph 0030];

comparing the amount of power consumed by the at least one computer system to a threshold [paragraph 0030], wherein the threshold is based on the maximum power output of the power supply [paragraph 0033]; and

placing one or more components of the at least one computer system in a lower-power state to reduce power consumption in response to the amount of power consumed by the at least one computer system exceeding the threshold [paragraph 0034].

8. As per claim 6, Kling et al. disclose comparing the amount of power consumed by the at least one computer system to a second threshold [paragraph 0035 – total power consumption reaches the lower threshold];

placing the at least one component of the computer system, currently in a lower-power state, in a higher-power state, such that the at least one component consumes more power, in response to the amount of power consumed by the at least one computer system being less than the second threshold [paragraph 0035].

9. As per claim 8, Kling et al. disclose one or more of the threshold based on the maximum power output of the power supply and the second threshold is determined such that a minimal change in power consumption does not result in changing a power state of the at least one component [paragraph 0033].

10. As per claim 10, Kling et al. disclose prioritizing applications running on the multiple computer systems [two processor fig. 1]; wherein the step of placing one or more components in a lower power state further comprises identifying one of the multiple computer systems running one or more low priority applications, and placing at least one component in the identified computer system in a lower power state [paragraph 0031].

11. As per claim 15, Kling et al. disclose placing one or more components in a lower state comprises reducing power consumption of one or more of a processor [paragraph 0031].

12. Claims 16-22, 25, 29-41 are rejected under 35 U.S.C. 102(a) as being anticipated by Spitaels et al. US 20030125886.

13. As per claim 16, Spitaels et al. disclose a power system generating power for at least one computer system, the power system comprising:

at least one power supply operable to provide power for the at least one computer system [inherent – 205 fig. 3];

a power monitor operable to determine the power consumption of the at least one computer system [paragraph 0030].

a power provisioning system [201 fig. 3] operable to compare the power consumption of the at least one computer system to a threshold associated with a maximum capacity of the power supply, and further operable to place one or more components of the at least one computer system in a lower-power state in response to the power consumption exceeding the threshold [paragraph 0033, 0042, 0044, 0050-0051].

14. As per claim 17, Spitaels et al. disclose the power supply is designed based on a nominal power consumption of the at least one computer system [inherent from paragraph 0007-0008].

15. As per claim 18, Spitaels et al. disclose the maximum capacity of the at least one power supply is approximately equal to the nominal power consumption of the at least one computer system [paragraph 0008].

16. As per claim 19, Spitaels et al. disclose the power provisioning system is connected to a cooling system [404, 406 fig. 5; paragraph 0056] and is operable to receive messages from the cooling system [intelligent air conditioning system 404 fig. 5] associated with the availability of cooling resources for cooling the at least one computer system [paragraph 0054-0055], the power provisioning system being operable to control the power consumption of the at least one

computer system [inherently from paragraph 0016] based on a message received form the cooling system [also from paragraph 0006[1]].

17. As per claim 20, Spitaels et al. disclose the power provisioning system is operable to place at least one component of the at least one computer system in a lower-power state in response to receiving a message from the cooling system indicating that insufficient cooling resources are available for cooling the at least one computer system [inherently from paragraph 0016, 0054-0055].

18. As per claim 21, Spitaels et al. do not expressly teach the power provisioning system is operable to place at least one of the at least one component currently in a lower-power state in a higher-power state in response to receiving a message from the cooling system indicating that excess cooling resources are available. However, this feature is inherent to the Spitaels et al. system as show by paragraph 0016 and 0054 that, if there is insufficient cool air for the system[2], the power provisioning system would places the at least one component in to the lower power state. Therefore, It is inherent that that system would places the at least one component currently in a lower-power state in a higher-power state in response to receiving a message [there is sufficient cooling] from the intelligent air conditioning system indicating that excess cooling resources are available else the system would be inoperable.

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[1] Spitaels et al. disclose that the computer system consume twice as much power when the processors are fully computational loaded and operating in a warm environment, then when computationally idle and operating in a cool environment.

19. As per claim 22, Spitaels et al. disclose the one or more components comprise a processor, and the power provisioning system is operable to instruct the processor to reduce clock speed for reducing power consumption [paragraph 0051].

20. As per claim 25, Spitaels et al. disclose the at least one computer system comprises multiple computer systems [fig. 3], and the power provisioning system is operable to prioritize the multiple computer systems for placement in lower-power state based on an importance of applications executing on the multiple computer systems [paragraph 0050].

21. As per claim 29, Spitaels et al. disclose the at least one computer system comprises multiple computer systems receiving power via a power bus, and the power provisioning is operable to disconnect a portion of a power bus to place one of the multiple computer in a lower power state [paragraph 0035, 0063, 0050].

22. As per claim 30, Spitaels et al. disclose the power monitor [106 fig. 1] is connected to the at least one power supply [104 fig. 1]to measure the output power of the at least one power supply for determining the power consumption of the at lest one computer system [paragraph 0042].

23. As per claim 31, Spitaels et al. disclose the at least one computer system comprises multiple computer systems connected to the at least one power supply via a power bus [inherent

[2] Indicated by the temperature sensor which communicate to the power provision by the intelligent air conditioning

from paragraph 0063], and the power monitor is connected to the power bus to measure the power consumption of the multiple computer systems [paragraph 0033].

24. As per claim 32, Spitaels et al. disclose the one or more components comprise one or more of a processor, a floating point unit, one or more storage devices, one or more memory ICs, and a cache or a portion of a cache [inherent from paragraph 0051].

25. As per claim 33, Spitaels et al. disclose a system comprising:

A multiple computers system housed in a an enclosure [paragraph 0063];

A cooling system operable to distribute cooling fluid to the multiple computer system in the enclosure based on one or more of the power consumption and heat dissipation of the multiple computer systems [paragraph 0054-0055]; and

A power system connected to the cooling system [paragraph 0054 – intelligent air conditioning system 404, 406 are coupled to the controller 201 (power provisioning system) fig. 5] and including a power supply operable to generate power for the multiple computer systems and a power provisioning system [paragraph 0035], wherein the power provisioning system is operate to control power consumption of at least one or the multiple computer system based on an availability of cooling resources for cooling the multiple computer systems [paragraph 0014, 0054-0056].

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system.

26. As per claim 34, Spitaels et al. disclose [inherently from paragraph 0014, 0054-0056] the cooling system is designed based on a nominal heat dissipation of the multiple computer systems and the power supply [inherently from paragraph 0007-0008, 0039, 0062] is designed based on the nominal power consumption of the multiple computer systems.

27. As per claim 35, the cooling system is operable to transmit a message to the power provisioning system indicating insufficient cooling resources are available for cooling the multiple computer systems or excess cooling resources are available for cooling the multiple computer systems [paragraph 0054]; and

The power provisioning system operable to reduce power consumption of at least one of the multiple computer systems in response to receiving a message indicating insufficient cooling resources are available for cooling the multiple computer systems [paragraph 0014]; and

However, Spitaels et al. do not disclose expressly the power provisioning system is operable to increase power consumption of at least one of the multiple computers in response to receiving a message indicating excess cooling resources are available for cooling the multiple computer systems. However, this feature is inherent to the Spitaels et al. system as indicated by paragraph 0014 and 0054 that the intelligent air condition systems coupled to the controller operable to communicate with the controller to inform the controller whether sufficient cool air is available and reduced power (operate at a lower speed) of the at least one of the plurality of devices if the over temperature condition is detected[3]; therefore, inherently that the controller would return the at least one of the plurality of devices back to operate at normal speed when the

[3] The over temperature condition indicated that there is an insufficient of cooling resources.

temperature return to ideal condition (sufficient cooling resources is now available). The Spitaels et al. would be terrible insufficient and unproductive if this feature is not available since the system would not able to operate at its maximum capacity.

28. As per claim 36, Spitaels et al. the power provisioning system is operable to compare the power consumption of the multiple computer systems to a threshold associated with a maximum capacity of the power supply [paragraph 0048] and reduce the power consumption of at least one of the multiple computer systems in response to the power consumption exceeding the threshold [paragraph 0050].

29. As per claim 37, Spitaels et al. disclose the enclosure is a rack [paragraph 0063].

30. As per claim 38, Spitaels et al. disclose the enclosure is a data center [paragraph 0063].

31. As per claim 39, Spitaels et al. disclose an apparatus controlling power consumption of at least one computer system using a power supply means having a maximum power output based on a nominal power consumption of the computer system, the apparatus comprising:

Means for determining an amount of power consumed by the at least one computer systems [202A-202C fig. 6].

Means for comparing [201 fig. 6] the amount of power to a threshold, wherein the threshold is based on the maximum power output of the power supply means [paragraph 0042, 0044]; and

Means for placing one or more components of the at least one computer system in a lower power state to reduce power consumption in response to the power consumption of the at least one computer system exceeding the threshold [paragraph 0050, 0051].

32. As per claim 40, see discussion in claim 35.

33. As per claim 41, see discussion in claim 35.

Claim Rejections - 35 USC § 103

34. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

35. Claims 2-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kling et al. as applied to claim 1 above, and further in view of Montero et al. US 20030015983.

36. As per claim 2, Kling et al. teach a cooling system is operable to cool the at least one computer system [inherent]. However, Kling et al. do not teach the determining whether sufficient cooling resource are available and placing at least one component of the at least one computer system in a lower state in response to insufficient cooling resources.

Montero et al. teach another computer system includes a plurality of cooling fans configured to provide sufficient cooling to the system. Specifically, Montero et al. teach

determining whether insufficient cooling resources are available for cooling the at least one computer system [paragraph 0028, 0039]; and

placing at least one component of the at least one computer system in lower-power state in response to insufficient cooling resources being available to cool the at least one computer system [paragraph 0045-0046].

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to have modified the system of Kling et al. with the determining of cooling resources of Montero et al. to placing at least one component of the at least one computer system in a lower state in response to insufficient cooling resources.

The motivation for doing so would have been to prevent damage to the computer system due to insufficient cooling.

Therefore, it would have been obvious to combine Kling et al. with Montero et al. to obtain the invention as specified in claim 2.

37. As per claim 3, Montero et al. teach determine whether excess cooling resources are available for cooling the at least one computer system [From table 3 and paragraph 0046[4]]; and

placing the at least one component of the computer system currently in lower-power state [operating speed at 50%] in a higher-power state [operating speed at 75% inherently at full speed], such that the at least one component consumes more power, in response to excess cooling resources being available.

[4] the decrease of temperature indicated that excess cooling resources are available.

38. As per claim 4, Montero et al. teach determining whether excess cooling resources are available for cooling the at least one computer system comprises determining whether an amount of cooling fluid distribute to the at least one computer system is less than an excess cooling threshold [Table 3 – threshold is when both Fans are operating and the temperature is at 102 degree].

39. As per claim 5, Montero et al. teach determining whether insufficient cooling resources are available for cooling the at least one computer system comprises determining whether an amount of cooling fluid distributes to the at least one computer system exceeds a threshold associated with the maximum capacity of the cooling system [Table 3 – When both fans are operating and the temperature still increasing up to 96 degree].

40. Claims 7, 10, 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kling et al. as applied to claim 1 and 6 above, and further in view of Oprescu et al. U.S. patent 5,752,046.

41. As per claim 7, Kling et al. teach placing the at least one component of the computer system in a higher-power state comprises the determining whether if the power consumption of system has reached a lower threshold or if a predetermined period of time has elapsed and placing the at least component in a higher-power state in response to the determining. However, Kling et al. do not teach determining whether placing the at least one component in a higher-power state will cause the power consumption of the at least one computer system to exceed the threshold based on the maximum power consumption of the at least one computer system.

Oprescu et al. teach another power management system which tracks the total amount of power consumption by devices connected to the computer system. Specifically, Oprescu et al teach determining whether placing the at least one component in a higher-power state will cause the power consumption of the at least one computer system to exceed the threshold base on the maximum power consumption of the at least one computer system; and placing the at least component in a higher-power state in response to determining the power consumption will not exceed the threshold [col. 8 lines 20-65].

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to have modified the system of Kling et al. with the determining of whether placing the at least one component in a higher-power state will cause the power consumption of the at least one computer system to exceed the threshold of Oprescu et al.

The motivation for doing so would have been to provide the system the ability to prevent the system from prematurely or unknowingly placing the at least one component in a higher-power state resulting in the power consumption of the computer system exceeding the threshold..

Therefore, it would have been obvious to combine Kling et al. with Oprescu et al. to obtain the invention as specified in claim 7.

42. As per claim 13, Kling et al. teach placing one or more components of the ate least one computer system in a lower-power state comprises determining the one or more components to be placed in a lower power state base on the priority information. However, Kling et al. do not teach expressly the storing of information including components in the at least one computer system, power state of the components, power consumption of the component.

Oprescu et al. teach another power management system that capable of tracking the total amount of power drawn from a bus by devices connected to the bus. Specifically, Oprescu et al. teach a repository [50 fig. 2] storing power state information including power consumption and priority information, wherein the power provisioning system is operable to utilize the power state information to identify a component of the one or more components [col. 8 lines 43-51] to be placed in a lower-power state or a higher power state [109, 114, 115 – 110 fig. 2].

At the time of the invention was made, it would have been obvious to one of ordinary skill in the art to have modified the system of Spitaels et al. with the repository storing power state information as taught by Oprescu et al. in order to provide the power controller the ability to precisely determining the actual power requirements of devices and more effectively controlling the operation of the devices to efficiently utilize available power [col. 3 lines 1-14].

43. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kling et al. as applied to claim 1 above, and further in view of Bradley et al. US 20030177406.

44. As per claim 9, Kling et al. teach the replacing the at least one component in a lower power state in response to the power consumption of the at least one computer system. However, Kling et al. do not teach placing the at least one component of the at least one computer system in a lower power state in response to the cooling efficiency of the components.

Bradley et al. teach another method for managing power consumption in a computer server. Specifically, Bradley et al. teach determining a cooling efficiency of components in the at least one computer system [42-46 fig. 4]; and

selecting one or more of the components to be placed in a lower power state based on an amount of energy needed to cool the one or more components; wherein a component requiring more energy to be cooled is selected before a component requiring less energy to be cooled [46-47 fig. 4].

At the time of the invention was made, it would have been obvious to one of ordinary skill in the art to have modified the system of Kling et al. with the placing of the at least one component of the at least on computer system in a lower power state in response to the determining of its cooling efficiency as taught by Bradley et al.

The motivation for doing so would have been to provide the system a more efficient way to selectively place the at least one component of the computer system in a lower-power state.

45. Claims 11-12, 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kling et al. as applied to claim 1 above, and further in view of Oehler et al. US 20040003303.

46. As per claim 11, Kling et al. teach a processor for the at least one computer system is operable to be placed in lower-power states, wherein the lower-power state being associated with a lower clock speed, and placing one or more components of the at least one computer system in a lower power state comprises placing the processor in the lower-power state [paragraph 0043]. However, Kling et al. do not teach expressly a processor is operable to be placed in multiple lower-power states.

Oehler et al. teach another method and apparatus for static and dynamic power management of computer system. Specifically, Oehler et al. teach a processor for the at least one

computer system is operable to be placed in multiple lower-power states, each lower-power state being associated with a lower clock speed [paragraph 0036-0037].

At the time of the invention was made, it would have been obvious to one of ordinary skill in the art to have modified the system of Kling et al. with the processor for the at least one computer system is operable to be placed in multiple lower-power state as taught by Oehler et al. since the multiple lower-power state is well know in art for ACPI system.

47. As per claim 12, the system of Kling et al. modified by Oehler et al. teach a system is operable to instruct the processor to be place in one of the multiple lower power state but do not specifically teach placing the processor in one of the multiple lower-power states comprises instruction the processor not to consume more than a predetermined amount of power. However, it would have been obvious to one of ordinary skill in the art that, by instructing the processor to be in one of the multiple lower power state, the system specifically instructed the processor not to consume more than a predetermined amount of power.

48. As per claim 14, Kling et al. teach placing the at least one component of the computer system currently in a lower power state in a higher power state. However, Kling et al. system modified by Oehler et al. do not teach placing the component in to a higher power state based on the stored information. However, it would have been obvious to one of ordinary skill in the art that, since the system placing a component into the lower power state base on the stored information, the system would included the claimed placing of a component into the higher power state based on the stored information.

49. Claims 23-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Spitaels et al. as applied to claim 16 above, and further in view of Lee et al. US 20030204762.

50. As per claim 23, Spitaels et al. teach the control [power provision] can control a computer device to operate at less than maximum load. However, Spitaels et al. do not teach expressly the control is operable to instruct the processor to reduce power consumption of the processor to a calculated value or range of values.

Lee et al. teach another method for dynamically adjusting power consumption for a computer system when the power consumption exceeds the predetermined maximum power supply output [paragraph 0022]. Specifically, Lee et al. teach expressly the control is operable to instruct the processor to reduce power consumption of the processor to a calculated value or range of values [table 1 of p. 1; paragraph 0023-0024].

At the time of the invention was made, it would have been obvious to one of ordinary skill in the art to have modified the system of Spitaels et al. with the reduction of power consumption of the processor to a calculated value or range of values as taught by Lee et al. in order to allows the system to efficiently operate without exceeding maximum power output of a power supply.

51. As per claim 24, Lee et al. teach the one or more components comprises a processor operable to be placed in one of multiple lower-power states [table 1 p. 1].

52. Claims 26-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Spitaels et al. as applied to claim 16 above, and further in view of Oprescu et al.

53. As per claim 26, Spitaels et al. teach the power control, when the amount of power consumed by the at least one computer system exceeded a threshold, selectively powering off lower priority devices to reduce the power drawn. However, Spitaels et al. do not teach a repository storing power state information for the one or more of components in the at least one computer system, wherein the power provisioning system is operable to utilize the power state information to identify a component of the one or more components to be placed in a lower-power state or a higher power state.

Oprescu et al. teach another power management system that capable of tracking the total amount of power drawn from a bus by devices connected to the bus. Specifically, Oprescu et al. teach a repository [50 fig. 2] storing power state information, wherein the power provisioning system is operable to utilize the power state information to identify a component of the one or more components [col. 8 lines 43-51] to be placed in a lower-power state or a higher power state [109, 114, 115 – 110 fig. 2].

At the time of the invention was made, it would have been obvious to one of ordinary skill in the art to have modified the system of Spitaels et al. with the repository storing power state information as taught by Oprescu et al. in order to provide the power controller the ability to precisely determining the actual power requirements of devices and more effectively controlling the operation of the devices to efficiently utilize available power [col. 3 lines 1-14].

54. As per claim 27, Oprescu et al. teach the power state information comprises one or more of power consumption of the one or more components and priority information associated with prioritizing the one or more components for changing the power state of the one or more components [50 fig. 2].

55. Claim 28 is rejected under 35 U.S.C. 103(a) as being unpatentable over Spitaels et al..

56. As per claim 28, Spitaels et al. teach each computer allows to monitor their own power and directly report their power draw to the controller [paragraph 0058]; and when a potential of overload condition is detected, the controller may selectively powering off lower priority devices. Therefore, it would have been obvious to one of ordinary skill in the art that when a computer system falls below a second threshold, the controller would operable to place at least one of the one or more components in a higher power state in response to the amount of power consumed by the at least one computer system falling below the second threshold since the system of Spitaels et al. would be terribly insufficient if the controller does not allow a system, which was previously powering off, to continue running its assigned tasks.

57. Claim 42 is rejected under 35 U.S.C. 103(a) as being unpatentable over Spitaels et al. as applied to claim 33 above, and further in view of Kling et al.

58. As per claim 42, Spitaels et al. teach the means [201 fig. 6] for comparing the amount of power consumed by the at least one computer system to a threshold; and

The means [controller paragraph 0051] for placing the at least one component of the computer system in a lower power state. However, Spitaels et al. do not teach expressly the

controller operable to compare the amount of power consumed by the at least one computer system to a second threshold and further to place the at least one component in a higher power state, such that the at least one component consumers more power, in response to the amount of power consumed by the at least one computer system being less than the second threshold.

Kling et al. teach another systems and methods for monitoring power in power distribution system wherein the systems including a controller that monitoring the characteristic of power from a device and outputting the command to the device to operate at a lower power state, when the controller detected that the power consumption of a device is exceeding a threshold. Specifically, Kling et al. teach a means [controller 150 fig. 1] for comparing the amount of power consumed by the at least one computer system to a second threshold [lower threshold paragraph 0055]; and further operable to place the at least one component in a higher power state, such that the at least one component consumes more power, in response to the amount of power consumed by the at least one computer system being less than the second threshold [paragraph 0035].

At the time of the invention was made, it would have been obvious to one of ordinary skill in the art to have modified the system with a second threshold of Kling et al. in order to provide the system the ability to safely placing the at least one component of the computer system in a higher-power state when the power is available.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vincent T. Tran whose telephone number is (571) 272-7210. The examiner can normally be reached on 7:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas c. Lee can be reached on (57 1)272-3667. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Vincent Tran